

## PATENT COOPERATION TREATY



## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 15 MAR 2005

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Applicant's or agent's file reference P17104-MAZ		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 02/13506	International filing date (day/month/year) 29.11.2002	Priority date (day/month/year) 29.11.2002	
International Patent Classification (IPC) or both national classification and IPC H04L12/18			
Applicant TELEFONAKTIEBOLAGET LM ERICSSON (PUBL) et al			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 6 sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand  17.06.2004		Date of completion of this report  11.03.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840		Authorized Officer  Tous Fajardo, J  Telephone No. +49 30 25901-489 	

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 02/13506**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-23 as originally filed

**Claims, Numbers**

1-18 received on 24.12.2004 with letter of 20.12.2004

**Drawings, Sheets**

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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International application No. **PCT/EP 02/13506**

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-18
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-18
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

Reference is made to the following document:

D1: WO 00/33535 A (FAIRMAN IAN RALPH ;SMITH ALAN PHILIP (GB); RUDKIN STEVEN (GB); SAR) 8 June 2000 (2000-06-08)

1) The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-18 does not involve an inventive step in the sense of Article 33(3) PCT.

1.1) The document D1 discloses (the references in parentheses applying to this document) a method for performing a flexible multicast of multicast data to a multicast group within a telecommunication system wherein the multicast data is provided by a broadcast/multicast server and transferred by means of channels to the users registered to the multicast group (see page 10, lines 9-11), wherein

multi-channel multicast groups are provided (see page 12, lines 22-24 and figure 4), wherein each multi-channel multicast group is configured and uniquely identified by means of a first identifier (see page 12, line 28 and figure 4, "410"), and each multi-channel multicast group offers at least one channel wherein a channel is uniquely identified by means of a second identifier (see page 12, line 29 and figure 4, "420", "430" and "440"),

and an announcement multicast group is provided for informing about availability and configuration of the multichannel multicast groups (see page 10, lines 17-25) wherein

the announcement multicast group is announced to the user and the user joins the announcement multicast group in order to be informed regularly about the available multi channel multicast group (see page 10, lines 9-25 and page 16, lines 24-27), and the first identifier is used to join the user to the multi-channel multicast group and to hop between multi channel multicast groups (see fig 2, "220" and page 10, lines 23-25 and page 11, lines 2-3), and

the second identifier is used for zapping between channels (see page 12, line 22 -

page 13, line 6; the user zaps between the different tracks, i.e., figure 4, "420" and "430")

The subject-matter of claim 1 therefore differs from this known method in that the hopping is performed by means of a join-and-leave transaction to or from a multi channel multicast group. It could be discussed if this feature is implicitly disclosed in D1. If it is considered that it is not implicitly disclosed in D1 because there are a number of ways other than a join-and-leave transaction for performing said hopping, doing it by means of a said join-and-leave transaction is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to hop between multi channel multicast groups.

Therefore, the subject-matter of claim 1 cannot be considered as involving an inventive step (Article 33(3) PCT).

1.2) System claim 14 and receiver claim 16 correspond to method claim 1. D1 discloses also a system and a receiver for implementing the method as defined by claim 1, therefore the subject-matter of claims 14 and 16 does not involve an inventive step (Article 33(3) PCT).

2) Dependent claims 2-13, 15, 17 and 18 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step (Article 33(3) PCT), because they are either disclosed by D1 (see passages cited in the search report) or obvious to the skilled person.

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## Claims

5 1. Method for performing a flexible multicast of multicast data  
to a multicast group within a telecommunication system  
wherein the multicast data is provided by a  
broadcast/multicast server and transferred by means of  
channels to the users registered to the multicast group

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characterised in that

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multi-channel multicast groups (B1,B2,...) are provided,  
wherein each multi-channel multicast group is configured and  
uniquely identified by means of a first identifier,  
and each multi-channel multicast group offers at least one  
channel wherein a channel is uniquely identified by means of  
a second identifier,

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and an announcement multicast group (A) is provided for  
informing about availability and configuration of the multi-  
channel multicast groups  
wherein

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the announcement multicast group (A) is announced to the user  
and the user joins the announcement multicast group in order  
to be informed regularly about the available multi channel  
multicast group and,

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the first identifier is used to join the user to the multi  
channel multicast group and to hop between multi channel  
multicast group, wherein the hopping is performed by means of  
a join-and-leave transaction to or from a multi channel  
multicast group, and  
the second identifier is used for zapping between the  
channels.

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2. Method according to claim 1 characterised in that the configuration of the multi channel multicast group is performed by means of parameters defining different transmission quality, location dependent information, coding method, prise, protection key, reliability, expected jitter or restricted to certain subscriptions.
3. Method according to claim 1 or 2 characterised in that joining and leaving to and from the multi channel multicast group is user-driven and the user takes the decision to hop between the multi channel multicast groups.
4. Method according to claim 1 or 2 characterised in that joining and leaving to and from the multi channel multicast group is server driven with a mechanism controlled by the server.
5. Method according to claim 1 characterised in that the first identifier is a multicast address of a multi channel multicast group.
6. Method according to claim 1 characterised in that the second identifier depends on used access network.
7. Method according to claim 6 characterised in that the second identifier is the access bearer or an identifier identifying the multicast data flow transported on one access bearer or a combination of both.
8. Method according to one of the claims 1 to 7 characterised in that some further parameters describing a channel are sent by

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means of the announcement multicast group (A) or are included in each multi-channel multicast group.

- 5 9. Method according to claim 1 characterised in that the announcement multicast group A is sent regularly, in certain intervals or continuously.
- 10 10. Method according to one of claims 1 to 9 characterised in that a list of multi-channels groups not yet established but for which users have already shown interest is multicast to the users by means of the announcement multicast group A.
- 15 11. Method according to one of claims 1 or 10 characterised in that a new multi channel multicast group is established and announced to the users.
- 20 12. Method according to claim 10 or 11 characterised in that the new multi channel multicast group is established if a certain threshold level of users interest is reached,
- 25 13. Method according to one of claims 1 or 12 characterised in that the multi channel multicast group is dissolved when the last user leaves said group.
- 30 14. System adapted to perform a flexible multicast of multicast data to a multicast group within a telecommunication system wherein the multicast data is provided by a broadcast/multicast server and transferred by means of channels to the users having terminals registered to the multicast group
- characterised in that



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within the system  
multi-channel multicast groups (B1,B2,...) are provided,  
wherein each multi-channel multicast group is configured and  
uniquely identified by means of a first identifier,  
and each multi-channel multicast group offers at least one  
channel wherein a channel is uniquely identified by means of  
a second identifier,  
and an announcement multicast group (A) is provided for  
informing about availability and configuration of the multi-  
channel multicast groups  
and wherein the system has  
means for announcement of the announcement multicast group  
(A) to the users in order to be informed regularly about the  
available multi channel multicast group and,  
means for joining the user to the announcement multicast  
group and,  
means for joining the user to the multi channel multicast  
group using the first identifier and means for hopping  
between multi channel multicast groups by means of a join-  
and-leave transaction to or from a multi channel multicast  
group and,  
means for zapping the user between the channels using the  
second identifier.

15. System according to claim 14 characterised in that the  
system forces to user to change the group and/or to zap  
between the channels.

16. Receiver adapted to perform a flexible multicast of  
multicast data to a multicast group within a  
telecommunication system wherein the multicast data is  
provided by a broadcast/multicast server and transferred by

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means of channels to the users registered to the multicast group

characterised in that

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multi-channel multicast groups (B1,B2,...) are provided, wherein each multi-channel multicast group is configured and uniquely identified by means of a first identifier, and each multi-channel multicast group offers at least one channel wherein a channel is uniquely identified by means of a second identifier, and an announcement multicast group (A) is provided for informing about availability and configuration of the multi-channel multicast groups

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and the receiver has

means for receiving the announcement multicast group (A) and, means for joining the user to the announcement multicast group in order to be informed regularly about the available multi channel multicast group and, means for joining the user to the multi channel multicast group using the first identifier and, means for hopping between multi channel multicast groups by means of a join-and-leave transaction to or from a multi channel multicast group and, means for zapping between the channels using the second identifier.

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17. Receiver according to claim 16 characterised in that receiver has means for tuning the receiving data wherein the second identifier is used to select the appropriate bearer on

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which the channel is being transmitted in order to switch between access bearers.

- 5 18. Receiver according to claim 16 or 18 characterised in that receiver has means for de-multiplexing the channels according to the second identifier, which identifies the multicast data flow transported on one access bearer.